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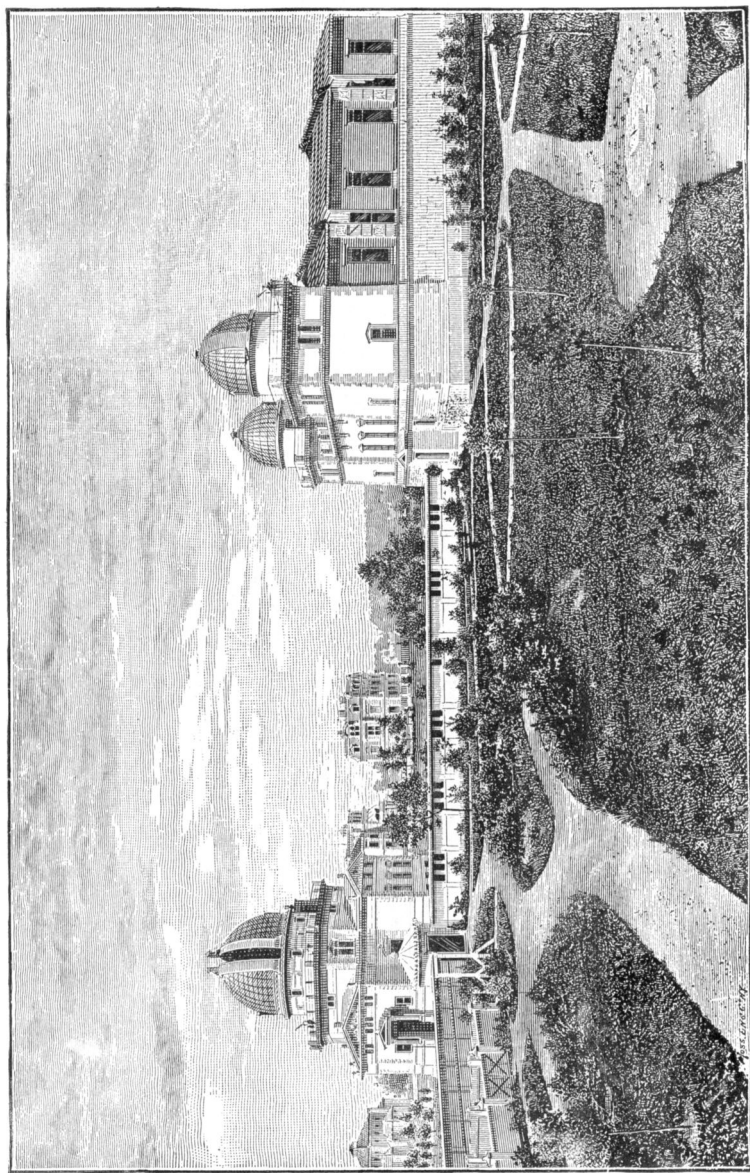
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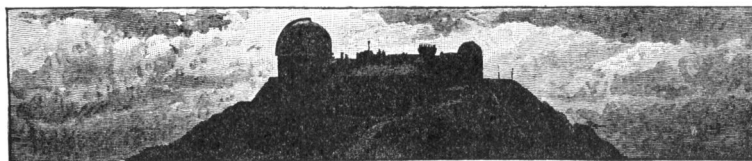
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STRASSBURG OBSERVATORY.



NOTICES FROM THE LICK OBSERVATORY.

PREPARED BY MEMBERS OF THE STAFF.

THE UNIVERSITY OBSERVATORY OF STRASSBURG.*

The accompanying cuts are copied from Lieut. WINTERHALTER'S Report on European Observatories, by the kind permission of the Superintendent of the U. S. Naval Observatory (See Publ. A. S. P., vol III, page 40). The short account here given is condensed from Lieut. WINTERHALTER'S report, and from other sources.

When the Germans took possession of Alsace, it was determined to create a University of the first class in the chief city of the province, and the installation and equipment of the new institution was on the most liberal scale. The most celebrated scholars of Germany were called to the University and were given *carte blanche* in the material provisions for the wants of their respective departments.

Dr. A. WINNECKE, then Vice-Director of the Imperial Observatory at Pulkowa, was made Professor of Astronomy in the University and Director of the new Observatory, and every detail of the buildings and instruments was left to him. The Observatory of Strassburg (begun in 1877) may be said to represent the matured ideas of European astronomers with regard to the construction and installation of instruments at the date in question, and it was designed and largely executed under the direct supervision of Prof. WINNECKE himself, who was universally acknowledged to have especial gifts in this, as in so many other directions.

I may be allowed to add that the designs for the Lick Observatory were being studied in the years 1874-1879, and that during a part of that time I had the great benefit of Professor WIN-

* Professor E. BECKER, Director.

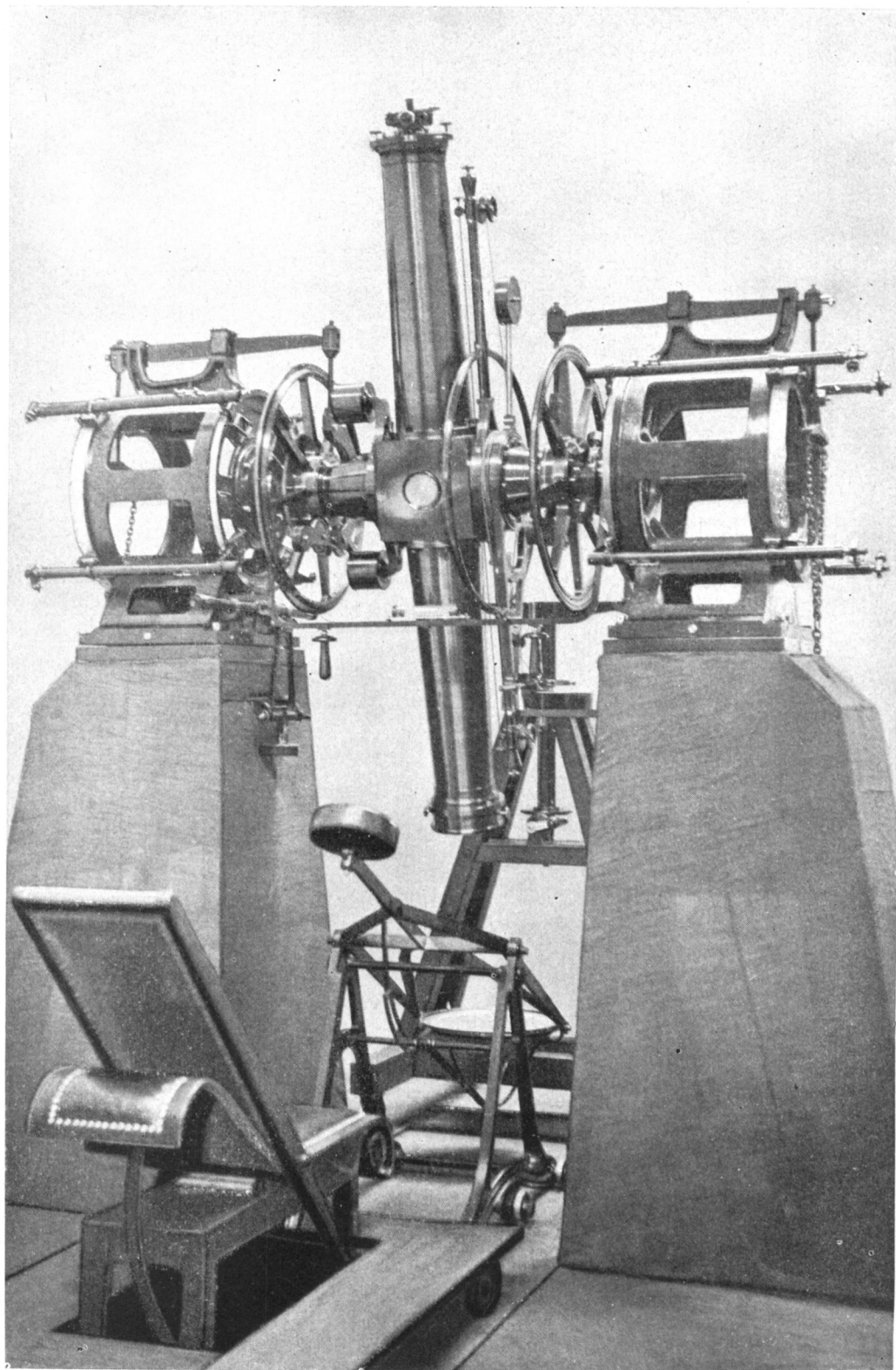
NECKE's advice, and a current knowledge of the plans adopted by him at Strassburg. If the constructions at Mt. Hamilton differ in some important respects from those at Strassburg, it is partly on account of the very different conditions at the two places.

The Observatory is situated at the end of the Botanic Garden of the University, and is composed of two principal buildings, the great dome, and the meridian rooms, with the smaller domes (see the cut). These are connected by a covered way, and connected by another covered way (shown in the extreme left-hand side of the cut) with the observer's house.

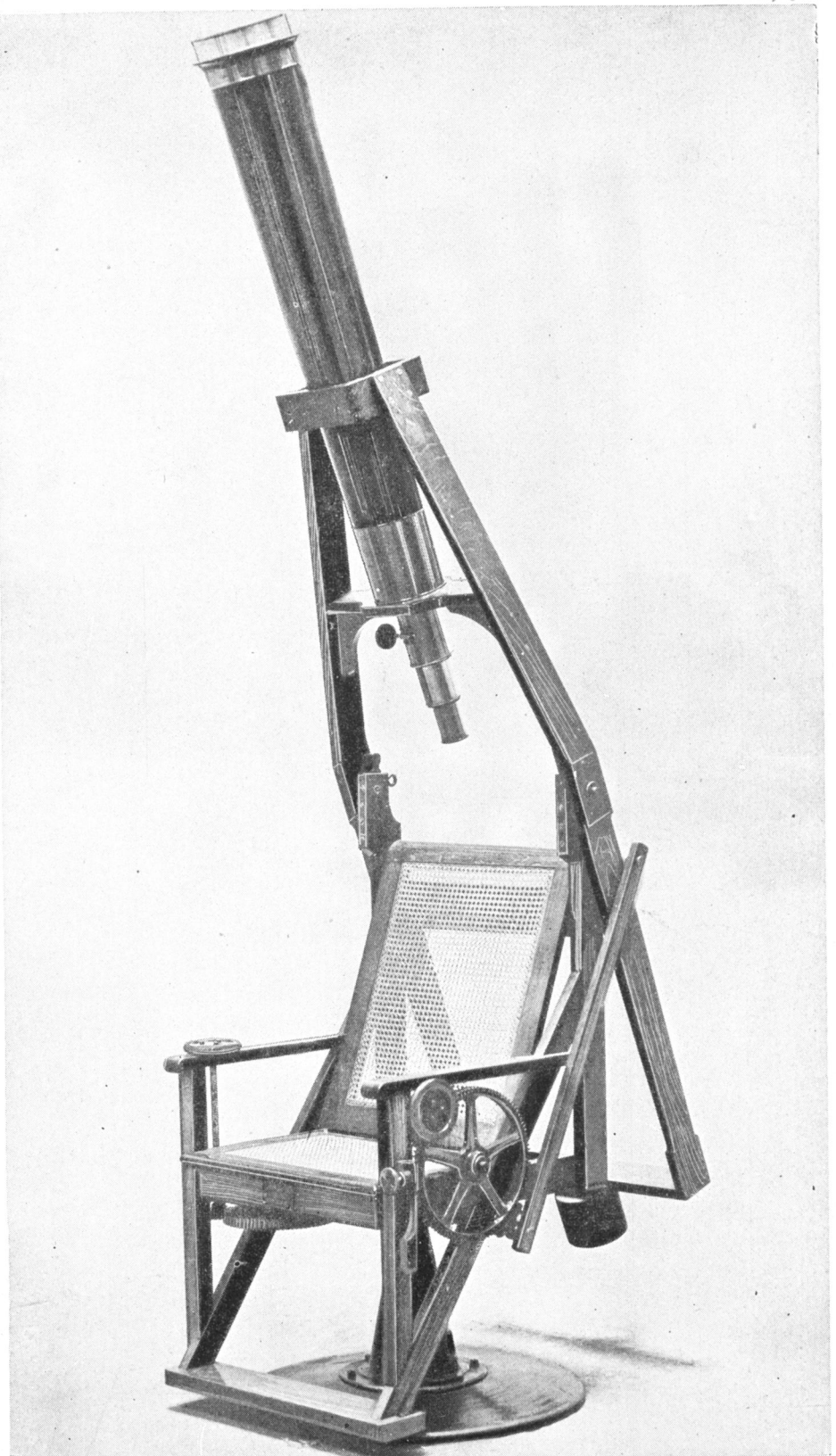
The great equatorial is of 18 inches aperture, and was made by MERZ, the successor of FRAUNHOFER. It is one of the largest telescopes of Europe (Milan, 18 inches, Cambridge, England, 25 inches, Vienna, 27 inches, Nice, 30 inches, Pulkowa, 30 inches), and is said to be an excellent instrument. The great dome is 36 feet in diameter. Its shutter is so arranged as to open from horizon to horizon, which will not be a good plan wherever high winds prevail.

Lieut. WINTERHALTER says (page 222): "The dominating idea of the arrangements of mounting and of service of the instrument seems to have been a desire to make the observer independent of assistance, an idea not realized here, and scarcely liable to be elsewhere, in an equatorial of large size." I have quoted this remark in order that I may say that this idea is perfectly realized at the Lick Observatory with the 36-inch equatorial, thanks to Messrs. WARNER & SWASEY, the makers of the mounting. A great number of the observations of 1888 and 1889 with the great telescope have been made by observers working alone—by Mr. BURNHAM, Mr. SCHAEFERLE, Mr. KEELER, Mr. BARNARD and myself. Mr. KEELER's spectroscopic observations (which are far more complex than ordinary micrometric work) have, in great part, been made without assistance; and assistance is not indispensable, except for photographic work, though, of course, two observers will do far more work in a given time than one. I am far from saying that this is the most economical way to use a great equatorial, but our experience shows that it is perfectly practicable.

Other extra-meridian instruments at Strassburg are the heliometer, the orbit-sweeper (an equatorial which can be set so as to sweep along the path of a planet or of a comet), the alt-azimuth and the comet-seeker.



REPSOLD MERIDIAN CIRCLE.



REPSOLD COMET SEEKER.

The latter (made by Messrs. REPSOLD) is so intelligent in idea that a cut of it is reproduced here.

I do not know that the orbit-sweeper has been used otherwise than as a simple equatorial. An alt-azimuth instrument which would give results approaching in precision to those derived from the best meridian-circles would be eminently fitted to solve many of the fundamental problems of astronomy by new methods. With this end in view, Professor WINNECKE designed such an instrument, of 4-inch aperture, which was made by the REPSOLDS, and mounted in one of the smaller domes. In spite of the great care expended upon this instrument, it does not seem, so far, to have realized the expectations regarding it. It appears that for the finest work it is necessary to confine an instrument (and the observer) to a simple set of operations, as was carried out by W. STRUVE in planning the instruments and work for the Pulkowa Observatory. Even the meridian circle, which gives both right-ascension and zenith distance at the same transit of a star, was pronounced by STRUVE to be too complex, and was relegated to differential work; while all the absolute determinations at Pulkowa have been made by means of the two separate instruments—the transit for R. A., and the vertical circle for Z. D.

The meridian circle of the Strassburg Observatory was made by the REPSOLDS on the general plans suggested by Professor WINNECKE. (See the cut.)

The meridian circle of the Lick Observatory is almost an exact copy of that at Strassburg, and is certainly a magnificent example of workmanship and design. I think, however, that both Professor SCHAEBERLE and myself would advise, if we were called upon to suggest any changes in it, a return to the severe simplicity advocated by W. STRUVE rather than any change in the opposite direction.

The observations so far made by these two meridian circles indicate that they will produce, in competent hands, work of a very high class, and they have no superiors. Two more circles by the same makers, of the same design and of the same dimensions, exist, though they are not yet in operation; namely, those of the observatories of Bonn and of Brussels.

The arrangement of the piers and of the meridian rooms at Strassburg shows the greatest care in design and in execution, and some of Professor WINNECKE's ideas have been carried out at Mt. Hamilton.

A very complete portable transit instrument by the REPSOLDS is shown in the accompanying cut as an example of elegant design, although it is not one of the Strassburg instruments; and here, perhaps, is the best place to give a cut of the form of heliometer mounting now adopted by the REPSOLDS and in use at the Observatories of New Haven, Cape of Good Hope, Leipzig, etc., etc.

The Strassburg Observatory has, so far, printed its observations in the *Astronomische Nachrichten* and not in separate volumes.

E. S. H.

OBSERVATIONS OF THE SOLAR ECLIPSE OF JUNE 6, 1891,
AT OGDEN, UTAH, BY W. C. PARMLEY.

OFFICE OF CITY ENGINEER AND BUILDING }
INSPECTOR, OGDEN, UTAH, June 28, 1891. }

DEAR PROFESSOR HOLDEN: I intended to report the eclipse of June 6 sooner, but have been very busy with my city work.

I used a lat. of $41^{\circ} 13' 09''.4$, and long. $7^h 27^m 53^s.95$, for a station of observation from the old observatory, of 6435 feet east, and 75 feet north (slightly different from the position used for the transit of *Mercury*).

Computed and observed time were for mountain time,

	Computed.	Observed.
	A.M.	A.M.
Beginning,	$6^d 7^h 18^m 10^s.5$	$18^m 23^s$
Ending,	$6^d 8^h 56^m 53^s.1$	$56^m 53\frac{3}{4}^s$

After the eclipse was farther on, I was satisfied I did not note the beginning soon enough, but for the ending I had good observations. There is also no personal bias in the noted times.

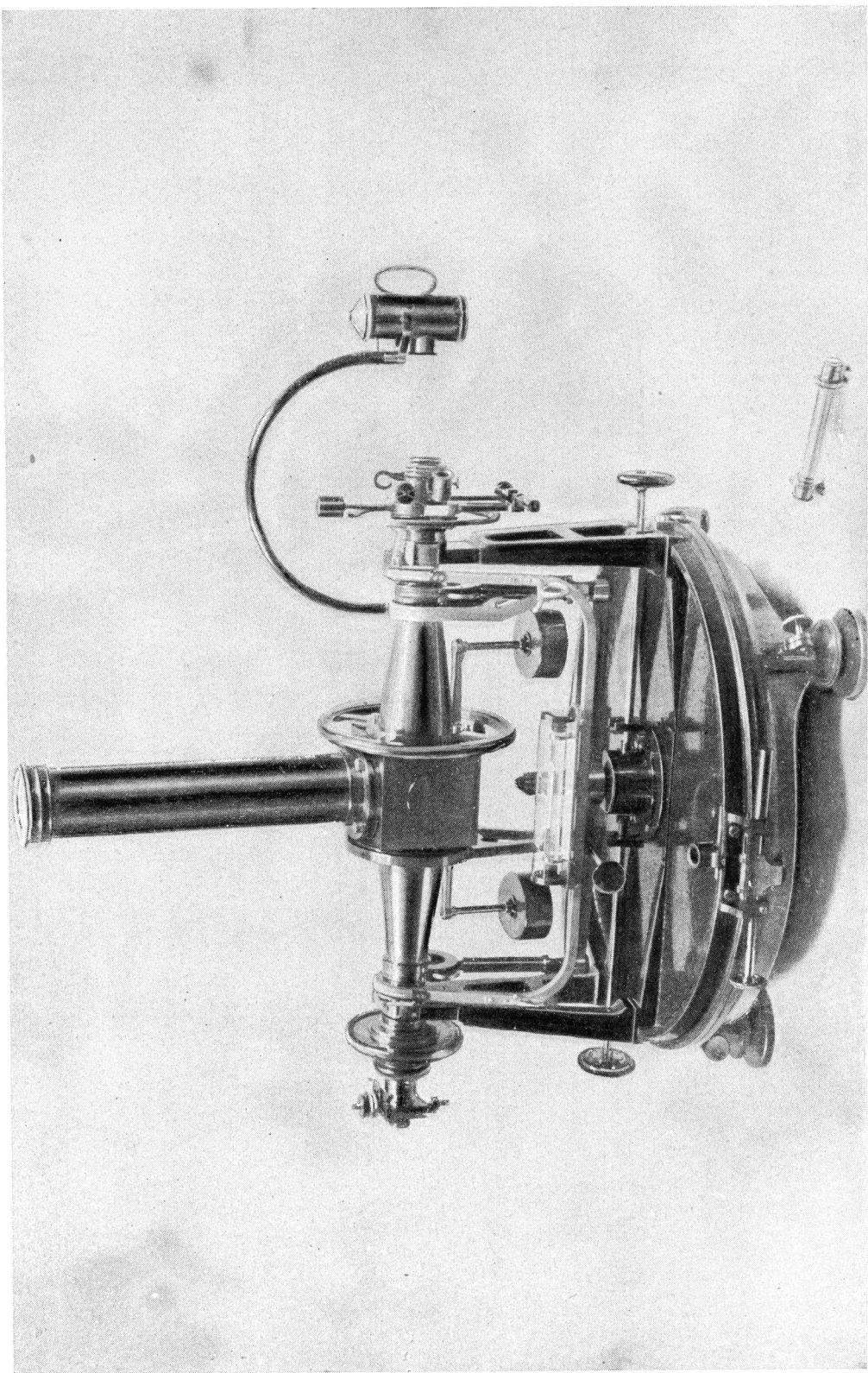
Yours very truly,

W. C. PARMLEY.

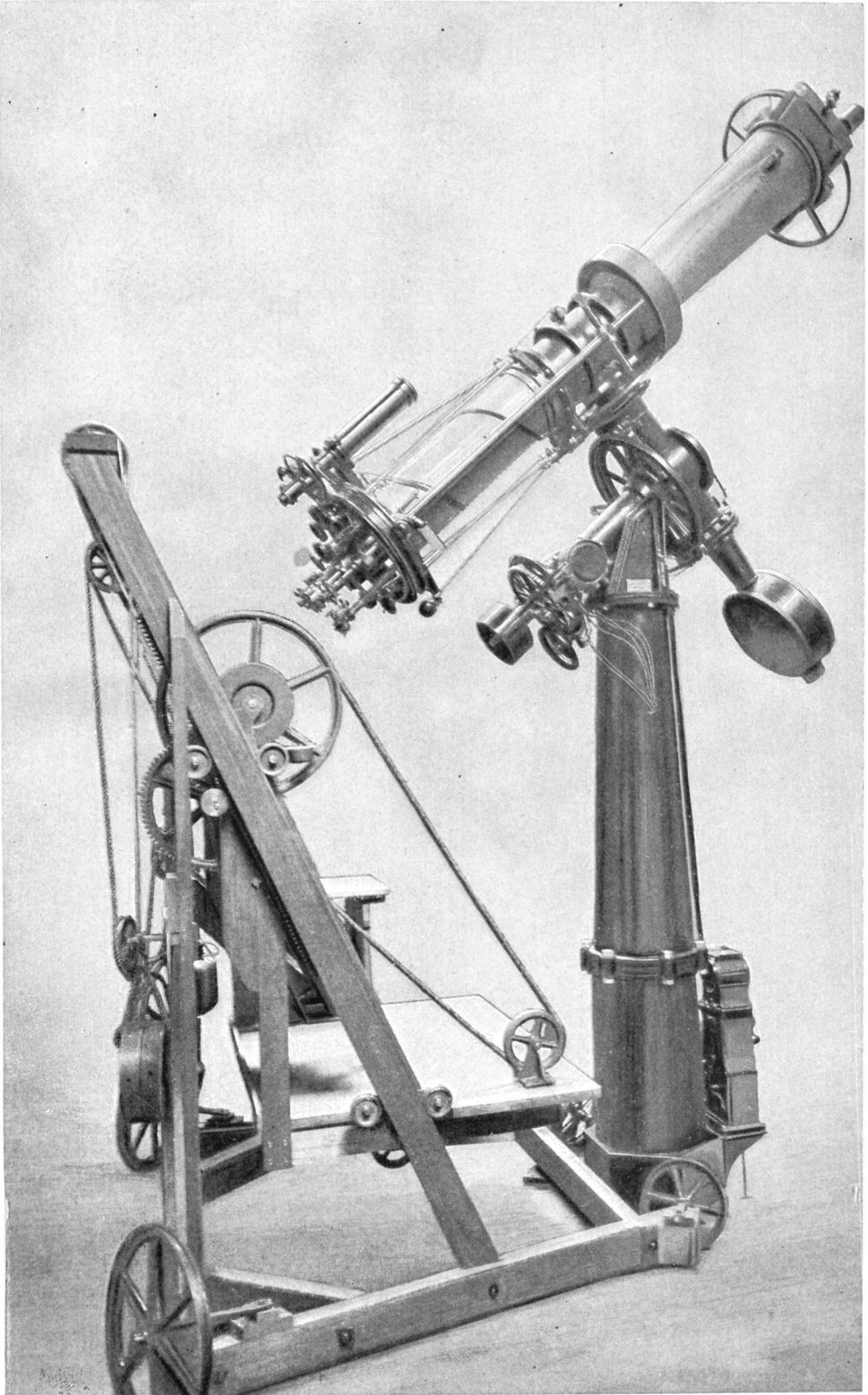
The telescope employed had an aperture of $1\frac{7}{8}$ inches, and magnified 45 diameters.

SCIENTIFIC VISITORS TO THE LICK OBSERVATORY.

Professor MENDENHALL, Chief of the U. S. Coast and Geodetic Survey, with Mr. FRÉMONT MORSE of the Survey made a stay of several days at Mt. Hamilton, in early July, for the purpose of determining the force of gravity by the new (short-pendulum) apparatus, lately introduced into the practice of the survey.



REPSOLD PORTABLE TRANSIT INSTRUMENT.



REPSOLD HELIOMETER.